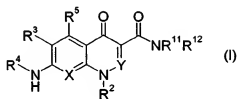


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A platelet aggregation inhibitor comprising a quinolone derivative represented by the formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient:



[the symbols in the formula have the following meanings:

X: C-R⁷ or N;

Y: C-R⁶ or N;

R¹¹: -H, a lower alkyl which may be substituted, or an amino which may be substituted with a lower alkyl which may be substituted;

R¹²: -H, or a lower alkyl or an aryl which respectively may be substituted, provided that R¹¹ and R¹² together with the adjacent nitrogen may form a cyclic amino which may be substituted;

R²: a lower alkyl, a cycloalkyl, an aryl or a hetero ring, which respectively may be substituted;

R³: a halogen, a lower alkyl or -O-lower alkyl;

R⁴: a cycloalkyl or a non-aromatic hetero ring, which respectively may be substituted, or a lower alkyl substituted with a cycloalkyl; provided that when R⁴ represents a non-aromatic hetero ring which may be substituted, a carbon atom constituting the ring binds to the adjacent NH;

R⁵: -H, a halogen, cyano, nitro, a lower alkyl, a halogeno-lower alkyl, a cycloalkyl, an aryl, a hetero ring, -O-lower alkyl, -OH, -NHCO-lower alkyl, -N(lower alkyl)CO-lower alkyl, an amino which may be substituted with a lower alkyl, or a cyclic amino which may be substituted;

R⁶: -H, a halogen, a lower alkyl or a halogeno-lower alkyl;

R⁷: -H, a halogen, a lower alkyl or a halogeno-(lower alkyl);

provided that when Y represents C-R⁶, R² and R⁶ together may form a lower alkylene or a lower alkenylene.

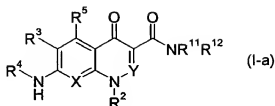
2. (original): A P2Y₁₂ inhibitor comprising the compound according to claim 1 as an active ingredient.

3. (withdrawn and currently amended): A method for inhibiting platelet aggregation in an individual, comprising administering a therapeutically effective amount of the compound of Use of the compound according to claim 1, as a platelet aggregation inhibitor and at least one pharmaceutically acceptable carrier, to the individual.

4. (withdrawn and currently amended): A method for inhibiting P2Y₁₂ in an individual, comprising administering a therapeutically effective amount of the compound of Use of the compound according to claim 1, and at least one pharmaceutically acceptable carrier, to the individual as a P2Y₁₂ inhibitor.

5 - 6. (canceled).

7. (original): A quinolone derivative represented by the formula (I-a) or a pharmaceutically acceptable salt thereof:



[the symbols in the formula have the following meanings:

X: C-R⁷ or N;

Y: C-R⁶ or N;

R¹¹: -H, a lower alkyl which may be substituted, or an amino which may be substituted with a lower alkyl which may be substituted;

R¹²: -H, or a lower alkyl or an aryl, which respectively may be substituted, provided that R¹¹ and R¹² together with the adjacent nitrogen may form a cyclic amino which may be substituted;

R²: a lower alkyl, a cycloalkyl, an aryl or a hetero ring, which respectively may be substituted;

R³: a halogen, a lower alkyl or -O-lower alkyl;

R⁴: a cycloalkyl or a non-aromatic hetero ring, which respectively may be substituted, or a lower alkyl substituted with a cycloalkyl; provided that wherein R⁴ represents a non-aromatic hetero ring which may be substituted, a carbon atom constituting the ring binds to the adjacent NH;

R⁵: -H, a halogen, cyano, nitro, a lower alkyl, a halogeno-lower alkyl, a cycloalkyl, an aryl, a hetero ring, -O-lower alkyl, -OH, -NHCO-lower alkyl, -N(lower alkyl)CO-lower alkyl, an amino which may be substituted with a lower alkyl, or a cyclic amino which may be substituted;

R⁶: -H, a halogen, a lower alkyl or a halogeno-lower alkyl;

R⁷: -H, a halogen, a lower alkyl or a halogeno-(lower alkyl);

provided that when Y represents C-R⁶, R² and R⁶ together may form a lower alkylenes or a lower alkenylene and provided that 7-(cyclohexylamino)-1-ethyl-6-fluoro-4-oxo-1,4-dihydroquinoline-3-carbohydrazide is excluded.

8. (original): The compound according to claim 7, wherein X is CH.
9. (original): The compound according to claim 8, wherein R³ is a halogen.
10. (original): The compound according to claim 9, wherein R⁴ is a cycloalkyl.
11. (original): The compound according to claim 10, wherein R⁵ is -H, -OH or a halogen.
12. (currently amended): The compound according to claim 11, wherein R¹² is a lower alkyl ~~respectively~~ substituted with one or more substituent groups selected from the Group Q_x ~~(provided that at wherein at least one of the substituent groups is selected from is substituted with a group of the Group P):~~
- Group P: -CO₂H, -SO₃H, -P(O)(OH)₂, and -OP(O)(OH)₂; and
- Group Q: -F, -OH, -CO₂H, -SO₃H, -P(O)(OH)₂, and -OP(O)(OH)₂
13. (withdrawn and currently amended): The compound according to claim 11, wherein NR¹¹R¹² together is a cyclic amino group substituted with one or more substituent groups selected from the Group Q_x ~~(provided that wherein at least one of the substituent groups is substituted with a group of the is selected from~~ Group P):
- Group P: -CO₂H, -SO₃H, -P(O)(OH)₂, and -OP(O)(OH)₂; and
- Group Q: -F, -OH, -CO₂H, -SO₃H, -P(O)(OH)₂, and -OP(O)(OH)₂.
14. (original): The compound according to claim 7, which is
[2-({ [7-(cyclohexylamino)-1-cyclopentyl-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}
amino)ethyl]phosphonic acid,

(2S)-2-({[7-(cyclohexylamino)-1-cyclopentyl-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)butanedioic acid,
2-({[7-(cyclohexylamino)-1-cyclopentyl-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)ethyl dihydrogen phosphate,
(2S)-2-({[7-(cyclohexylamino)-1-cyclopentyl-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)pentanedioic acid,
{ 2-[({[7-(cyclohexylamino)-6-fluoro-4-oxo-1-[(3S)-tetrahydrofuran-3-yl]-1,4-dihydroquinolin-3-yl]carbonyl}amino)ethyl]phosphonic acid,
{2-[({[7-(cyclohexylamino)-6-fluoro-4-oxo-1-[(3R)-tetrahydrofuran-3-yl]-1,4-dihydroquinolin-3-yl]carbonyl}amino)ethyl]phosphonic acid,
[2-({[7-(cyclohexylamino)-1-(1-ethylpropyl)-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)-1,1-difluoroethyl]phosphonic acid,
{2-[({[7-(cyclohexylamino)-6-fluoro-1-[2-hydroxy-1-(hydroxymethyl)ethyl]-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)ethyl]phosphonic acid,
[2-({[7-(cyclohexylamino)-1-ethyl-6-fluoro-4-oxo-1,4-dihydrocinnolin-3-yl]carbonyl}amino)ethyl]phosphonic acid,
[2-({[7-(cyclohexylamino)-1-(1-ethylpropyl)-6-fluoro-4-oxo-1,4-dihydrocinnolin-3-yl]carbonyl}amino)ethyl]phosphonic acid,
[2-({[7-(cyclohexylamino)-1-(1-ethylpropyl)-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)ethyl]phosphonic acid,
(2S)-2-({[7-(cyclohexylamino)-1-(1-ethylpropyl)-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)pentanedioic acid,
(2S)-2-({[7-(cyclohexylamino)-1-(1-ethylpropyl)-6-fluoro-4-oxo-1,4-dihydrocinnolin-3-yl]carbonyl}amino)pentanedioic acid or
[2-({[7-(cyclohexylamino)-1-(2,2-dimethyl-1,3-dioxan-5-yl)-6-fluoro-4-oxo-1,4-dihydroquinolin-3-yl]carbonyl}amino)ethyl]phosphonic acid, or a pharmaceutically acceptable salt thereof.

15. (currently amended): ~~The A~~ pharmaceutical composition comprising a compound according to any one of claims 7 through 14 and a pharmaceutically acceptable carrier.

16. (original): The pharmaceutical composition according to claim 15, which is a platelet aggregation inhibitor.

17. (original): The pharmaceutical composition according to claim 15, which is a P2Y12 inhibitor.

18. (withdrawn and currently amended): A method for inhibiting platelet aggregation in an individual, comprising administering a therapeutically effective amount of the compound of Use of the compound according to any one of claims 7 through 14 as a platelet aggregation inhibitor, and at least one pharmaceutically acceptable carrier, to the individual.

19. (withdrawn and currently amended): A method for inhibiting P2Y12 in an individual, comprising administering a therapeutically effective amount of the compound of Use of the compound according to any one of claims 7 through 14, and at least one pharmaceutically acceptable carrier, to the individual as a P2Y12 inhibitor.

20 - 21. (canceled).